

A NEW GENERIC PLACEMENT FOR *SCABRICOLA BACKAE*  
CERNOHORSKY, 1973.

FRED E. WELLS

*Western Australian Museum, Perth 6000, Western Australia*

SUMMARY

*Scabricola backae* is transferred to the genus *Mitra* on the basis of radular morphology.

REMARKS

Developing a reasonable system of taxonomy for the family Mitridae has been a difficult problem that has been aided substantially by the work of Cernohorsky (1966; 1976). Cernohorsky (1966) remarked that a generic placement of mitre species based on shell morphology alone was insufficient. The shells of some genera are very similar but the radular morphology may be quite different. Accordingly the generic arrangement Cernohorsky proposed was based primarily on the structure of the radula. Only tentative placements could be made for species where the shells were known but no radulae were available for examination. As radulae were subsequently found the initial generic placement would be substantiated or could prove erroneous. Just such an erroneous placement has recently been encountered.

Cernohorsky (1973) described a new species, *Scabricola backae*, from Flinders Bay, Augusta, Western Australia (Figure 1). The localities at which the holotype and nine paratypes were collected showed the species to have a range from the cool, temperate waters of Augusta northwards to the tropical waters at Onslow. No radula was available when *S. backae* was described and the species was placed in the genus *Scabricola* on the basis of shell morphology.

The radula of *Scabricola variegata* (Gmelin, 1791), the type species of the genus, was figured by Cernohorsky (1976). The central tooth has eight cusps that are largest in the medial portion of the tooth (Figure 2A). The lateral teeth have four cusps medially, and none on the leading edge of the tooth. The radula of *Mitra mitra* Linnaeus, 1758, the type species of the genus *Mitra*, has a central tooth with five cusps (Figure 2B). The lateral teeth have numerous cusps which are large medially and taper off in height distally.

The radula was removed from a live collected specimen of *Scabricola backae* found at Augusta, Western Australia, in January 1977 by Mrs. Wendy Anson (WAM 47-77). The radula (Figure 2C) had 56 rows of teeth; each row consisted of a central tooth flanked on each side by a single lateral tooth. Comparison of the radula of *Scabricola backae* with those of *Mitra mitra* and *Scabricola variegata* demonstrates a close affinity of *S. backae* with *M. mitra* and no relationship with *S. variegata*. *Scabricola backae* should thus be transferred to the genus *Mitra*.

ACKNOWLEDGEMENTS

Mrs. Glad Hansen brought the question of the generic status of *Scabricola backae* to my attention. She and Mrs. Wendy Anson made a special trip to Augusta to collect a live individual from which a radula could be obtained.

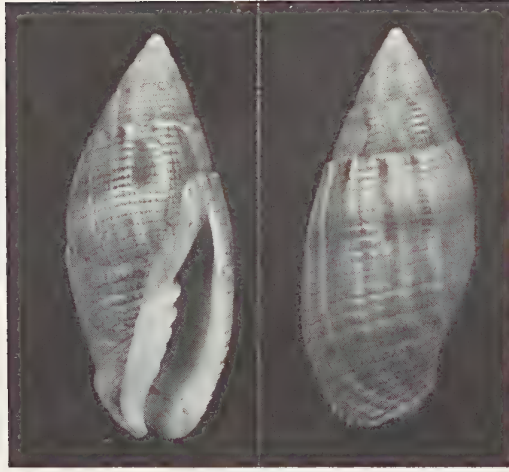


Figure 1.  
The holotype of *Scabricola backae* (WAM 14-72), shell height 22 mm.

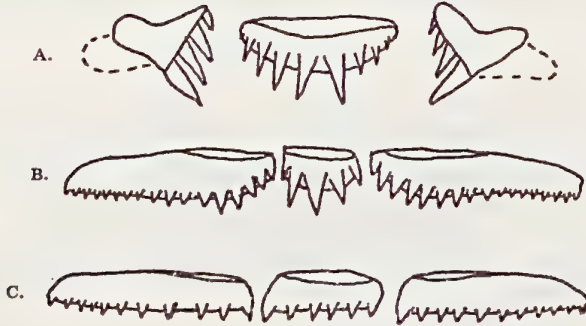


Figure 2.  
A row of radular teeth of *Scabricola variegata* (A) and *Mitra mitra* (B) (after Cernohorsky, 1976), and *Scabricola backae* (C).

#### REFERENCES

- CERNOHORSKY, W.O., 1966. A study of mitrid radulae and a tentative generic arrangement of the family Mitridae (Mollusca: Gastropoda). *Veliger* 9: 101-126.
- 1973. Description of new West Australian Mitridae and Vexillidae (Mollusca: Gastropoda). *Rec. Auckland Inst. Mus.* 10: 133-141.
- 1976. The Mitridae of the World. Part I. The subfamily Mitrinae. *Indo-Pacific Moll.* 3: 273-528.